

REMARKS

Claims 1-40 are all the claims pending in the application.

Support for amended Claims 1 and 37 is provided by the description at, for example, the fifth paragraph at page 10 through the paragraph bridging pages 10 and 11 of the specification, together with FIG. 1A.

No new matter has been added.

I. RESPONSE TO REJECTION UNDER 35 U.S.C. § 103

Referring to Section No. 2 at pages 2-6 of the final Office Action, Claims 1 and 3-40 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over U.S. Patent No. 4,500,423 (“Krug”) in view of U.S. Patent No. 7,022,221 (“Hedrick ‘221”) and in view of U.S. Patent No. 4,933,150 (“Haddad”).

Applicants respectfully traverse.

Claim 1 recites that the several pairs of segmented, parallel baffles arranged in rows comprise a first pair of baffles each having a first geometry followed by a second pair of baffles each having a second geometry. Claim 1 also recites that the first geometry and the second geometry are not the same. Claim 37 recites that the series of sets of at least two parallel, segmented, baffle plates each comprises a first set of baffles each having a first geometry followed by a second set of baffles each having a second geometry. Claim 37 also recites that the first geometry and the second geometry are not the same. A representative example of the features above recited in Claims 1 and 37 is provided by the non-limiting illustrations of present FIGS. 1A-1C, showing an embodiment having parallel baffle plates (1a, 1b; first pair) of the disk-type followed by parallel baffle plates (2a, 2b; second pair) of the donut-type.

The combination of Krug in view of Hedrick ‘221 and in view of Haddad does not teach or suggest at least the features above recited in Claims 1 and 37. In this regard, Krug does not teach pairs of parallel baffles arranged in rows in a stripping zone. Instead, Krug teaches single riser-supported ring baffles 75 and single doughnut baffles 77 arranged in order to prevent the

catalyst from falling straight. At column 9 lines 35-49, Krug describes its baffles arrangement in the stripper as providing the axial spacing between the wall and riser baffles to maintain a substantially constant cross-section for flow through stripping zone 39.

Actually, single baffles such as Krug's 77 and 75, fixed in sequence in a row, are commonly used in stripping chambers in FCC units in order to promote good catalyst/steam contacting. In contrast, the claimed apparatus employs an arrangement of at least two pairs of segmented, parallel baffles in sequence spaced along in the stripping chamber.

Hedrick '221 does not cure the deficiencies of Krug noted above. Instead, the examiner relies upon Hedrick '221 for an alleged teaching of segmented baffles. The examiner asserts that it would have been obvious to have segmented baffles as taught by Hedrick '221 in Krug's apparatus. Thus, even if, for the sake of argument, one of ordinary skill in the art would have been motivated to modify Krug by reference to Hedrick '221, as proposed by the examiner, the combination would not lead to the presently claimed subject matter.

Haddad does not cure the deficiencies of Krug in view of Hedrick '221 noted above. Instead, the examiner relies upon Haddad for an alleged teaching of a grid/filter. The examiner asserts that it would have been obvious to have a grid/filter as taught by Haddad in Krug's apparatus. Thus, even if, for the sake of argument, one of ordinary skill in the art would have been motivated to modify Krug in view of Hedrick '221 by reference to Haddad, as proposed by the examiner, the combination would not lead to the presently claimed subject matter.

For at least the foregoing reasons, Applicants request reconsideration and withdrawal of the present §103 rejection.

Further, the patentability of other embodiments falling within the scope of the present claims is separately argued as follows.

Embodiments of the claimed apparatus (e.g., Claims 15 and 16) have segments (rips) in each baffle corresponding to a free area, in the range from 5% to 20% of the total cross sectional area of the stripping chamber. This free area combined with the dimension and distribution of

the ribs, arranged in each pair of baffles, provide a reduced coalescence of the stripping fluid bubble while promoting the homogeneous flow vertically in the stripping apparatus.

The rips (segments) must be offset (not aligned) relative to each other in each pair of baffles. Also, the rips in the second disk baffle (e.g., 1a - upper cone shaped) may have larger widths, but smaller lengths, than the rips of the first (e.g., 1b - lower cone shaped) parallel baffle in a pair. The same may be sought in each pair of wall baffles (2a, 2b - donut type): the second baffle may have rips with widths larger than the rips of the first wall baffle. See, for example, the embodiments of Claims 17-20. In case the row of baffles comprises more than two pairs of baffles, the same dimensions and arrangement may be repeated.

Thus, the rips in a baffle of each pair may be offset relative to the rips in the next baffle, as shown in FIGS. 1B and 1C.

Therefore, the segmented baffles may be so spatially arranged (in pairs of offset rips) that the catalyst flows homogeneously vertically and horizontally so as to prevent stagnation zones and to improve the distribution of the stripping fluid. Consequently, embodiments of the present processes for stripping hydrocarbons correspond to an increased inventory and residence time within a stripping chamber, with improved overall efficiency, by using embodiments of the present apparatuses.

For all of the foregoing reasons, Applicants request reconsideration and withdrawal of the present §103 rejection.

II. RESPONSE TO REJECTION UNDER 35 U.S.C. § 103

Referring to Section No. 3 at pages 6 and 7 of the final Office Action, Claim 2 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Krug in view of Hedrick '221 and Haddad, and further in view of U.S. Application Publication No. 2002/0094313 ("Lu").

Applicants respectfully traverse.

Claim 2 depends from Claim 1. Therefore, the combination of Krug in view of Hedrick '221 and Haddad fails to teach or suggest the subject matter of Claim 2, for the same reasons as noted at Section I above.

Lu does not cure the deficiencies of the combination of Krug in view of Hedrick '221 and Haddad. Instead, the examiner relies upon Lu for an alleged teaching of a pipe-grid for feeding the gaseous pre-stripping fluid located in the upper part of the stripper apparatus. The examiner asserts that it would have been obvious to include a pipe-grid for feeding the gaseous pre-stripping fluid located in the upper part of a stripper apparatus, as taught by Haddad, in Krug's apparatus. Thus, even if, for the sake of argument, one of ordinary skill in the art would have been motivated to modify Krug in view of Hedrick '221 and Haddad by reference to Lu, as proposed by the examiner, the combination would not lead to the apparatus of Claim 2.

For the foregoing reason, Applicants request reconsideration and withdrawal of the present §103 rejection.

III. CONCLUSION

Reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the examiner feels may be best resolved through a personal or telephone interview, the examiner is kindly requested to contact the undersigned at the telephone number listed below.

AMENDMENT UNDER 37 C.F.R. § 1.114(c)
U.S. Application No. 10/643,968

Atty. Docket No. Q76952

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

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